

RECEIVED

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
 Washington, D.C. 20554

JUN 21 1993

FEDERAL COMMUNICATIONS COMMISSION  
 OFFICE OF THE SECRETARY

In the Matter of	)	Gen Docket No. 90-314
	)	ET Docket No. <u>92-100</u>
	)	
Amendment of the Commission's	)	RM-7140, RM-7175, RM-7617,
Rules to Establish New	)	RM-7618, RM-7760, RM-7782,
Personal Communications	)	RM-7860, RM-7977, RM-7978,
Services	)	RM-7979, RM 7980
	)	

To: The Commission

**COMMENTS OF ASSOCIATION OF AMERICAN RAILROADS**

The Association of American Railroads ("AAR"), by its attorneys and pursuant to Section 1.45 of the rules of the Federal Communications Commission ("FCC" or "the Commission"), hereby submits its Comments on the proposals of the Unlicensed PCS Ad Hoc Committee for 2 GHz Microwave Transition and Management ("UTAM") and the Wireless Information Networks Forum ("WINForum") regarding deployment of unlicensed personal communications services ("U-PCS"), which the Commission has proposed in the above-captioned proceeding.<sup>1/</sup>

**SUMMARY**

AAR and its member railroads are committed to working with the PCS industry to achieve rapid deployment of PCS in a manner that does not threaten the safety and reliability of the

<sup>1/</sup> These comments are timely filed pursuant to the Commission's Public Notice, GEN Docket 90-314, DA 93-577, released May 18, 1993.

No. of Copies rec'd  
 List A B C D E

railroads' private fixed microwave operations. AAR generally supports the efforts of the U-PCS manufacturers to ensure that microwave licensees in the portion of the 2 GHz band designated for U-PCS are not displaced until they are provided comparable alternative facilities and full compensation for relocation expenses.

AAR is very concerned, however, that the U-PCS manufacturers are seeking to deploy unlicensed devices before fully resolving technical issues necessary to protect railroads' fixed microwave facilities from harmful interference. Indeed, the proposals of UTAM and WINForum reveal an apparent contradiction within the U-PCS industry as to whether unlicensed devices can be deployed prior to full band clearing without causing interference to fixed microwave licensees. Yet, despite the absence of a resolution of this fundamental issue, the industry continues to urge that U-PCS devices be deployed with the greatest amount of urgency.

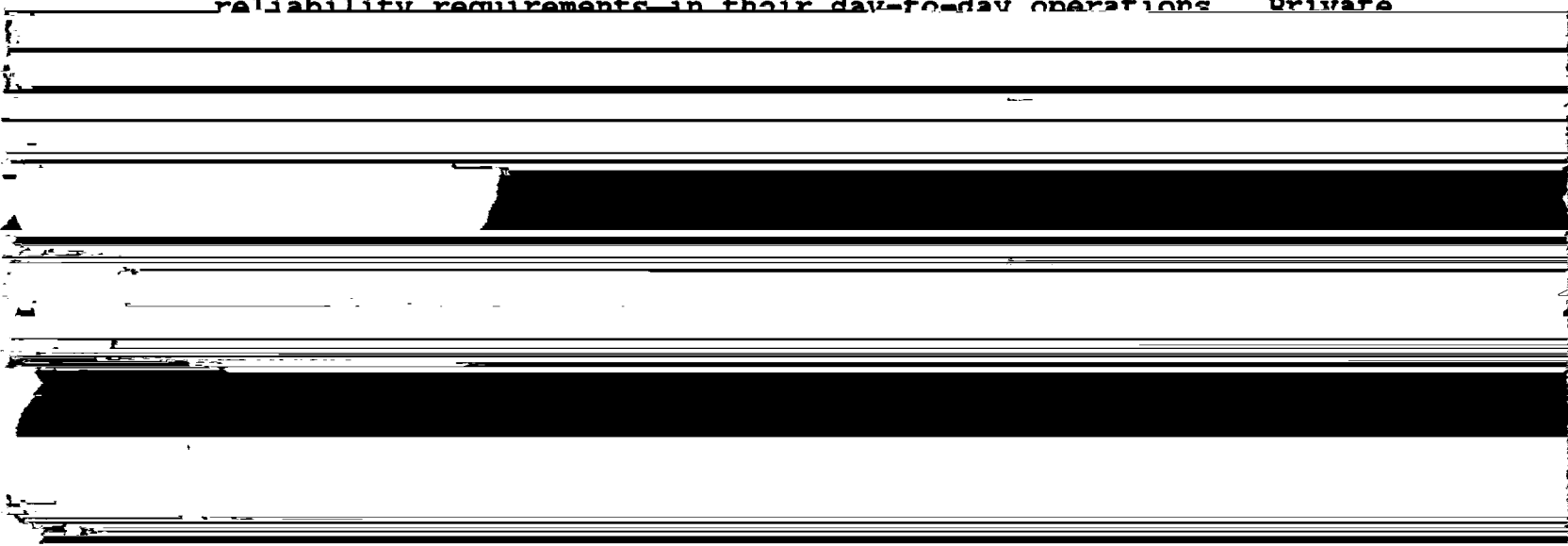
Deploying emerging technologies without protecting the fixed microwave operations of the railroads and other critical industries was the central problem with the Commission's original proposal to reallocate the 2 GHz band, a problem the Commission recognized and rectified with the transition framework. To prevent that problem with respect to deployment of U-PCS, the Commission should take the time necessary to ensure that a well thought-out solution to interference issues is developed. U-PCS devices should not be deployed until appropriate measures are in

**I. PRELIMINARY STATEMENT**

AAR is a voluntary, non-profit organization composed of member railroad companies operating in the United States, Canada and Mexico. These railroad companies generate 97 percent of the total operating revenues of all railroads in the United States. The AAR is the joint representative and agent of these railroads in connection with federal regulatory matters of common concern to the industry as a whole, including matters pertaining to regulation of communications. In addition, AAR functions as the frequency coordinator with respect to operation of land mobile and other radio-based services.

**II. RAILROADS USE 2 GHz PRIVATE FIXED MICROWAVE FACILITIES TO ENSURE SAFE AND RELIABLE OPERATIONS.**

The railroads use private fixed microwave systems that operate on frequencies in the 2 GHz band to meet safety and reliability requirements in their day-to-day operations. Private

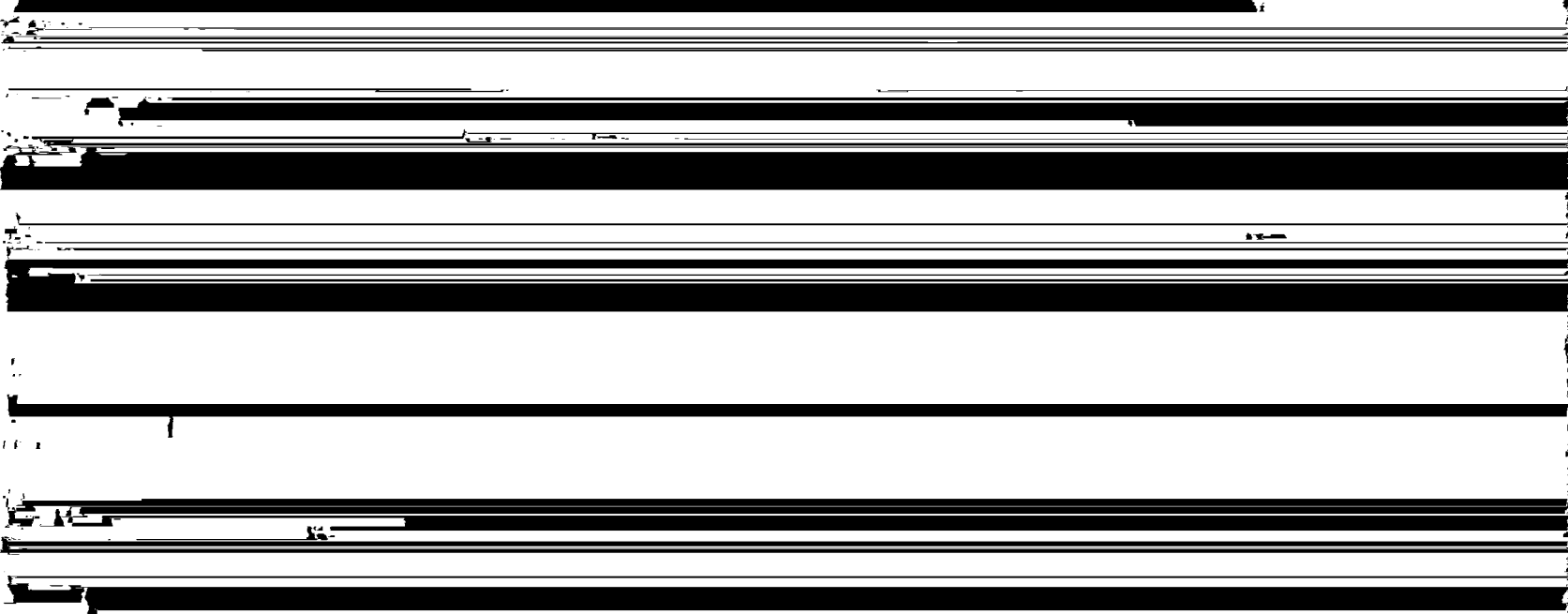


derailments. Microwave systems also are vital to coordination of operations among railroads.

### III. BACKGROUND OF PROCEEDING

Because of the railroads' extensive use of the 2 GHz band for private fixed microwave operations, AAR has been actively involved in this proceeding<sup>2/</sup> and the related proceeding to reallocate this band for PCS and other emerging technologies.<sup>3/</sup> AAR's paramount concern is to maintain the integrity and reliability of its member railroads' private microwave communications systems so as to ensure safe, reliable and efficient operation of the nation's railroads. Thus, AAR has supported the Commission's transition plan for the 2 GHz band, contingent on the Commission's guarantee that no fixed microwave licensee will be relocated involuntarily from the 2 GHz band until it is provided comparable alternative facilities and fully compensated for all relocation costs.<sup>4/</sup>

AAR has very serious concerns with regard to the Commission's proposal to authorize U-PCS in the 1910-1930 MHz band. The railroads utilize at least 25 fixed microwave links in



different railroad companies.<sup>5/</sup> The interoperability among all railroads make these links vital to the nationwide rail network. AAR is gravely concerned that these microwave facilities be protected from interference from U-PCS devices and that the railroads be fully compensated for relocation expenses if displaced from this band.

The broad consensus of parties that filed comments on the 2 GHz transition plan, including microwave licensees and PCS proponents, was that U-PCS devices require clear spectrum, making it necessary to relocate all microwave licensees from the 1910-1930 MHz band before any U-PCS devices can be deployed. AAR and many other parties pointed out that the framework established for relocating 2 GHz microwave licensees would not work for spectrum designated for U-PCS because no "licensee" would be responsible for funding the relocation to comparable alternative facilities. AAR recommended that the Commission issue a further notice of proposed rule making seeking comment on a specific plan for accommodating microwave licensees in spectrum designated for U-PCS.<sup>6/</sup>

---

5/ As of August 1992, the following railroads held licenses to operate in this band: Burlington Northern (8), Union Pacific (8), Atchison, Topeka & Santa Fe (6), Missouri Pacific (2), St. Louis Southwestern Railway (1), Illinois Central (1), Grand Trunk Western (1), Richmond, Fredericksburg & Potomac (1), and CSX (1).

6/ See Reply Comments of AAR, GEN Docket 90-314 (filed January 8, 1993) at 7-9.

#### IV. U-PCS INDUSTRY PROPOSALS

On May 14, 1993, UTAM, a coalition of manufacturers interested in selling U-PCS equipment, filed a report ("UTAM Report") recommending that the FCC (1) endorse establishment of an entity that would serve as a funding source for the relocation of existing fixed microwave users in the portion of the 2 GHz

**V. AAR SUPPORTS ESTABLISHMENT OF A MECHANISM FOR  
COMPENSATING MICROWAVE LICENSEES DISPLACED FROM THE 2  
GHz BAND.**

UTAM has proposed that the Commission establish an industry entity, modeled after private radio frequency coordinators, which would manage the relocation of fixed microwave licensees from spectrum designated for U-PCS.<sup>8/</sup> Participation in the entity -- and contribution of money into a relocation fund -- would be a condition of securing equipment approval to market or sell U-PCS devices. The entity would negotiate compensation and relocation arrangements with microwave licensees and distribute funds from its relocation fund to pay for construction and testing of alternative facilities for displaced microwave licensees, according to UTAM.

AAR supports UTAM's efforts to establish a mechanism for compensating microwave licensees for relocation from the 2 GHz band. The UTAM Report proposes certain functions that such a mechanism would perform, including administration, relocation negotiations, construction oversight and management and dispute resolution.<sup>9/</sup> These functions, regardless of the mechanism ultimately established, must be performed in a manner consistent with the principle of the basic transition framework adopted in

---

<sup>8/</sup> To date, the only spectrum proposed for U-PCS devices is the 1910-1930 MHz band. AAR's main concern is ensuring that railroads are guaranteed comparable alternative facilities and full compensation for displacement of fixed microwave facilities from any portion of the 2 GHz band. AAR notes, however, that the many problems associated with fulfilling these guarantees in the U-PCS band will be exacerbated if

ET Docket 92-9: No microwave licensee can be displaced involuntarily from any portion of the 2 GHz band until the new licensee provides comparable alternative facilities and pays the microwave licensee for all relocation expenses. In essence, UTAM would be required to comply with all the obligations required of an emerging technology licensee in the licensed PCS band.

With regard to dispute resolution, UTAM states that the mechanism established "would provide a forum for resolving interference and/or compensation disputes . . . with submission to the Commission on a last resort basis only."<sup>10/</sup> AAR does not support making a private entity the forum for resolving interference disputes. The Communications Act of 1934, as amended, directs the Commission to perform this function, and it should not be relegated to a private entity.<sup>11/</sup> Further, UTAM should not have any authority to resolve compensation disputes greater than an individual PCS licensee would have under the framework established in ET Docket 92-9.<sup>12/</sup>

---

<sup>10/</sup> UTAM Report at 19.

<sup>11/</sup> 47 U.S.C. § 303(f).

<sup>12/</sup> The use of arbitration and mediation, and the ultimate role of the Commission, in resolving disputes between microwave licensees and emerging technology entrants remains an outstanding issue in ET Docket 92-9. Order and Notice at para. 25.



**VI. AAR OPPOSES DEPLOYMENT OF U-PCS DEVICES, PRIOR TO BAND CLEARING, THAT WOULD POSE A RISK OF INTERFERENCE TO FIXED MICROWAVE OPERATIONS.**

**A. AAR Opposes Deployment of "Non-Nomadic" Devices Unless They Are Rendered Technically Incapable of Operating Outside Designated Geographic Areas.**

---

UTAM has proposed that the Commission permit deployment of "non-nomadic" U-PCS devices prior to clearing all fixed microwave licensees from the 1910-1930 MHz band. "Non-nomadic" devices would be defined as fixed devices and systems that operate in limited geographic areas, such as wireless PBXs and wireless data local area networks. UTAM has proposed that such systems "may also include associated portable devices, provided that the portable devices have been designed to operate only within the service area of the associated non-nomadic base station."<sup>13/</sup>

UTAM has proposed that such devices be authorized provided that the frequencies and geographic areas of operation be determined prior to deployment and prior to any relocation of the equipment. The entity established to fund relocation of microwave licensees would perform this coordination function and maintain a data base of microwave licensees and "non-nomadic" U-PCS devices. UTAM also has proposed that the Commission require "high visibility labelling" of unlicensed equipment indicating that it is unlawful to change its location of operation without prior coordination.

This proposal raises serious concerns regarding the integrity of the railroads' fixed microwave operations. UTAM is

---

<sup>13/</sup> UTAM Report at 19.

very vague about how it would "ensure non-interference to existing 2 GHz microwave operations."<sup>14/</sup> The proposal does not provide assurance that a "non-nomadic" portable device could not be moved away from its intended operating location and then activated somewhere else, e.g., in close proximity to a co-frequency fixed microwave path.

The railroads' microwave facilities, including those in the 1910-1930 MHz band, are used for critical safety and reliability functions. These operations can tolerate little, if any, interference, without risking serious harm to public safety. Accordingly, railroads cannot rely on users of "non-nomadic" devices obeying labels that prohibit use in unauthorized locations. Deployment of such devices prior to band clearing would be acceptable only if it were certain that they could not be operated outside a designated geographic location. UTAM representatives appearing at a briefing at the FCC on June 7, 1993, indicated that equipment manufacturers are working on a way to render U-PCS devices technically and operationally incapable of operating outside designated areas. Absent a technical solution, which would render such U-PCS devices inoperable outside designated areas, AAR opposes deployment of "non-nomadic" devices on any spectrum where fixed microwave facilities still operate.

---

<sup>14/</sup> UTAM Report at 19.

**B. AAR Opposes Deployment of "Nomadic" Devices  
at Any Time Prior to Complete Band Clearing.**

UTAM also has proposed that the Commission recognize that U-PCS devices can be "nomadic" and "non-nomadic" and that it permit operation of "nomadic" devices prior to band clearing if such operation complies with the rules for "non-nomadic" devices.

AAR opposes this proposal for several reasons. First, as discussed above, there is no guarantee that U-PCS devices, whether labelled "non-nomadic" or "nomadic," can be rendered technically incapable of operating outside a specified geographic location. Second, if there were a way to render a U-PCS device operational only in a specified area, providers of devices that also could be "nomadic" would be especially reluctant to do so because, by definition, that would make their devices "non-nomadic" only.

Finally, this proposal contradicts the strong message that PCS advocates have expressed throughout this proceeding -- that U-PCS devices must operate on clear spectrum, lest they cause interference to fixed microwave licensees. To AAR's knowledge, the companies that comprise UTAM previously have not distinguished between "nomadic" and "non-nomadic" devices when asserting the need for clear spectrum for U-PCS. With the newly adopted nomenclature, the UTAM companies appear to be retreating from their position that clear spectrum is an essential prerequisite for operating U-PCS devices. AAR is concerned that, once any U-PCS devices are deployed, microwave facilities will be subject to interference and thereby effectively displaced from the band with no guarantee of comparable alternative facilities

and full compensation for relocation expenses. Such a result would directly contravene the transition plan adopted in ET Docket 92-9.

**VII. WINFORUM'S RECOMMENDED RULES DO NOT SUPPORT UTAM'S PROPOSAL FOR EARLY DEPLOYMENT OF U-PCS DEVICES.**

In its May 17, 1993, filing, WINForum made recommendations regarding power limits, spectrum sharing, frequency use limits and channel access, which it suggests should be the basis of the Commission's rules for U-PCS equipment. According to WINForum, the recommended rules are designed to permit maximum coexistence of U-PCS devices transmitting both voice and data communications. The rules incorporate a "listen-before-talk" concept, whereby a device may not transmit if the spectrum it will occupy already is in use within its range.

WINForum's proposal does not address spectrum sharing between microwave licensees and U-PCS devices. The absence of any recommended rule on this issue is surprising given that such sharing is contemplated by UTAM's proposal for early deployment of "non-nomadic" devices.<sup>15/</sup> Documents submitted to Commission staff during ex parte meetings on May 4, 1993, indicate that WINForum has a standing working group on microwave-U-PCS spectrum sharing.<sup>16/</sup> However, the only spectrum sharing contemplated by WINForum's recommended rules is sharing among U-PCS devices. AAR

---

<sup>15/</sup> The absence of any technical rules on microwave and U-PCS spectrum sharing is especially surprising because many of the companies constituting WINForum also belong to UTAM.

<sup>16/</sup> See WINForum notice of ex parte communication, GEN Docket 90-314, filed May 5, 1993.

is concerned that the lack of rules on spectrum sharing between microwave licensees and U-PCS devices reflects that such sharing is not possible without causing interference to fixed microwave facilities.

## CONCLUSION

The transition plan the Commission adopted for the 2 GHz band guarantees that no fixed microwave licensee will be displaced involuntarily from the 2 GHz band until it is provided comparable alternative facilities and full compensation for relocation expenses. This guarantee applies to all 2 GHz microwave licensees, including those that occupy spectrum designated for U-PCS. AAR supports the efforts of UTAM to establish a mechanism that will ensure fulfillment of this guarantee. However, AAR opposes any deployment of U-PCS devices

## **CERTIFICATE OF SERVICE**

I, Jaime Y.W. Bierds, a secretary for the law firm Verner, Liipfert, Bernhard, McPherson and Hand, Chartered, do hereby certify that a true and correct copy of the foregoing "Comments of Association of American Railroads" was delivered by hand, this 21st day of June, 1993, to the following:

Commissioner James H. Quello  
Federal Communications Commission  
1919 M Street, N.W., Room 802  
Washington, D.C. 20554

Commissioner Andrew D. Barrett  
Federal Communications Commission  
1919 M Street, N.W., Room 844  
Washington, D.C. 20554

Commissioner Ervin S. Duggan  
Federal Communications Commission  
1919 M Street, N.W., Room 832  
Washington, D.C. 20554

Larry Irving  
Assistant Secretary  
National Telecommunications  
and Information Administration  
Herbert C. Hoover Building  
14th Street & Constitution Avenue, N.W.  
Washington, D.C. 20230

Ralph Haller, Chief  
Private Radio Bureau  
Federal Communications Commission  
2025 M Street, N.W., Room 5002  
Washington, D.C. 20554

Dr. Thomas P. Stanley, Chief  
Office of Engineering and Technology  
Federal Communications Commission  
2025 M Street, N.W., Room 7002  
Washington, D.C. 20554

Dr. Robert M. Pepper, Chief

Office of Research and Statistics